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
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hamel et al. Examiner: Pham, Khanh B.
Serial No. 09/912,586 Group Art Unit: 2167
Filed: July 24, 2001 Docket No. SVL920010010U
S2
Title: DATA LOADING FROM A REMOTE DATA SOURCE

5 CERTIFICATE UNDER 37 CFR 1.8

I hereby certify that this correspondence and identified enclosures are being deposited with the United States Postal Service, first class mail, postage prepaid, under 37 C.F.R. § 1.8 on the date indicated below and is addressed to the Mail Stop: Appeal Brief-Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on June 13, 2005.

10 
Sandra Parker

APPEAL BRIEF

15 Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

20 Sir:

This Brief is submitted pursuant to the Notice of Appeal filed on April 13, 2005 and is filed in triplicate, as required by 37 CFR Sec. 1.192.

25 The Commissioner is hereby authorized to charge payment of the \$500 Appeal Brief Fee due under 37 CFR Sec. 1.17(c) and any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 09-0460.

1. Real Party in Interest

The real party in interest in this appeal is International Business Machines Corporation of Armonk, New York and assignee.

2. Related Appeals and Interferences

There are no other appeals or interferences known to the appellant, the appellant's legal representative or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

3. Status of Claims

Claims 1-24 remain pending in the application and stand rejected and are the subject of this appeal. Claims 4, 12 and 20 are original claims. Claims 1, 5, 9, 13, 17 and 21 were previously amended on July 12, 2004. Claims 1, 2-3, 6-8, 10-11, 14-16, 18-19 and 22-24 were amended and entered as requested on March 14, 2005. A copy of all pending claims is set forth in an attached Appendix.

4. Status of Amendments

Amendment and Response to Final Office Action containing a request for reconsideration submitted on March 14, 2005 has been entered, as indicated in the Advisory Action of March 28, 2005.

5. Summary of the Claimed Subject Matter

The present invention, as shown in Specification starting on p.7, performs record-by-record transfer between two sites, implemented in DB2 Family Crossloader. It loads from a record (p.8, li. 2-3) pointed to by a cursor. For this purpose it uses a new command, INCURSOR (p.8, li.8-12) to reference each record separately, instead of referencing and transferring the whole file, referenced by INDDN file name in prior art. Server has multi-database access to DBMSs. Target site requests data loading from the source site via a block of Structured Query Language (SQL) statements. Target site loads records concurrently with the unloading of records in the source site.

All independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the Multi-database Server database management system, invented by the same Assignee. The purpose and benefit of the claimed invention is to avoid limitations and physical constraints of the File Transfer System at either the source or the target site, as shown in Specification p. 1, li. 23, p. 2, li. 10 - p. 3, li. 8, p. 7, li. 14-21, etc. File Transfer system is used in

conventional systems where the whole file is referenced by INDDN file name. Claimed invention does not use the File Transfer System. Thus, it not bound by the maximum file transfer size, because it transports data record by record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Moreover, it
5 allows transfer of data from multiple data sources, possibly stored in different formats, by using existing conventional technology, such as a multi-database software server and Distributed Relational Database Architecture. Thus, in the claimed invention record attributes may span multiple data sources and can provide data in a neutral data format. Furthermore, record attributes from multiple record sources can be accessed within a single transaction. These
10 claimed novel features distinguish over the cited prior art, under 35 U.S.C. 103(a) and are described in Figures and Specification on p.2, p. 3, li. 1-8; p. 6, li. 18-23, p. 7-8, etc.

Specifically, the independent claim 1 states:

1. A method for loading data from a remote data source record by record, in a computer system
15 network connecting a source site and a target site via a database connection communication line, the method comprising the following steps:

(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs;

(b) at the target site requesting data loading from the source site via a block of Structured
20 Query Language (SQL) statements; and

(c) transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site.

25 Therefore, the present invention teaches in claim 1: "loading data from a remote data source record by record,

(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs;

(b) at the target site requesting data loading from the source site via a block of Structured
30 Query Language (SQL) statements; and

(c) transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site.

6. Grounds of Rejection

The claims are on Appeal for the following grounds of rejection:

(A) Claims 1-2, 6-10, 14-18, 22-24 stand unpatentable under 35 U.S.C. Sec. 103(a) as being obvious over IBM Corporation ("Datajoiner: a Multidatabase Server Version 1), hereinafter "IBM", and in view of Hejlsberg et al. (US 6,151,602), hereinafter "Hejlsberg".

(B) Claims 3, 11, 19 stand unpatentable under 35 U.S.C. 103(a) as being obvious over IBM and Hejlsberg, as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Gottenmukkala ("Interfacing Parallel Applications and Parallel Databases"), hereinafter "Gottenmukkala".

(C) Claims 4-5, 12-13, 20-21 stand unpatentable under 35 U.S.C. 103(a) as being obvious over IBM and Hejlsberg, as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Vassilakis et al. ("Implementing Embedded Valid Time Query Languages"), hereinafter "Vassilakis".

7. Arguments

Because the Advisory Action repeats Final Office Action arguments verbatim, this Appeal Brief uses exclusively the Final Office Action sections.

(A) Sec. 103(a) Rejection of Claims 1-2, 6-10, 14-18, 22-24

Sec. 103(a) Rejection of Independent Claims 1, 9 and 17

i) Examiner has Misinterpreted the Limitations of the Claims and Prior Art

To establish prima facie obviousness of a claimed invention, all the claims limitations must be taught or suggested by the prior art, MPEP Sec. 2143.03, citing *In re Royka*, 180 USPQ 580 (CCPA 1974).

Applicant regrets that all his attorney's attempts to obtain an examiner's interview and explain misinterpretation of certain computer science terms in office actions were unnecessarily turned

down, despite her numerous attempts to talk to the Examiner and his supervisors, thus prolonging prosecution and causing unnecessary costs. Each Response to Office Action clearly explained each misinterpretation, but to no avail, because they were again repeated verbatim, with all grammatical errors. Further, the prosecution was prematurely cut off. Applicant is justly
5 entitled and should receive cooperation and a full and fair hearing (MPEP 706.07) because rejection reasoning was not clearly developed and did not include rebuttal of all arguments raised in the Applicant's reply nor produced required documentary evidence. Moreover, Final Office Action introduced two new grounds of rejection and several alleged motivation grounds, that were neither necessitated by Applicant's Amendment nor based on IDS, and Applicant has the
10 right of rebuttal, which was not allowed.

MPEP 2144.3 section allows reliance on common knowledge in making a rejection only in limited circumstances, in light of recent court decisions, and very rarely in final rejection. It should always be supported by documentary evidence, except when the asserted facts are well-
15 known and notorious or capable of instant and unquestionable demonstration as to defy dispute and serve only to fill in the gaps in an insubstantial manner, and is inappropriate otherwise, such as in the Final Office Action. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record, as the principal evidence for rejection, and such action lacks substantial evidence in support of the rejection. Although Applicant demanded such
20 evidence be shown and adequately traversed assertions of the first Office Action in the Amendment, the Examiner failed to supply explicit documentary evidence and issued the Final Office Action instead, although MPEP 2144.3 requires that then it must be set forth explicitly and the Applicant must be allowed to challenge the assertion in the next reply after the Office Action. Moreover, if no amendment is made to the claims other than in response to Office Action
25 objection, the Examiner must not rely on any other teachings in the reference, if the rejection is made final, except when they do not result in a new issue. This law was not followed in this case because Final Office Action introduced several new issues and alleged motivations, which Applicant has the right to rebut.

30 Moreover, references were deemed to teach what was not shown in the references, and parts of each claim and even parts of claimed steps were considered in isolation. This practice could also be subject to abuse. Office Action must find all claim limitations in the references. Here, Office

Actions rely on references which do not show all limitations, do not have similar utility, function, properties and most are from a different environment, and none shows any motivation to combine references. Scope should be in the field of applicant's endeavor or reasonably pertinent to the particulate problem with which the inventor was concerned, but that was not shown in the Office Actions. Examiner selects elements to replace or add to the primary reference, although there is nothing to suggest that that should or could be done, that they could be used or operate in the manner recited in claimed invention for the purpose of avoiding the physical constraints of the whole file transfer and not to be bound by the maximum file transfer size.

As per claims 1, 9, 17, Office Action stated that IBM teaches a method, a system and a program storage device for loading data from a remote data source, in a computer system network connecting a source site and a target site via a database connection communication line (See page 11, Fig. 4), the method comprising the following steps:

- "(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs" at page 11, Fig. 4;
- "(b) at the target site requesting data loading from the source site via a block of Structured Query Language (SQL) statements or their equivalent" at page 7, Fig. 1; and
- (c) transporting data via the database connection communication line according to a multi-database access communication protocol" at page 12, 1st paragraph.

The Applicant respectfully objected to this misinterpretation because IBM reference does not have the quoted language. It is the language taken verbatim from the claim 1 of the present invention, with IBM reference page numbers added in brackets.

Section 10 of Final Office Action Response to Arguments directs that Office Action should be read as follows: "The quoted languages are exact languages taken from claims" and "the portion after the quoted languages, begin with "at" followed by line and column or page number is the portion of the reference containing teaching of the quoted language".

However, this way of writing is impermissible. Term "should" implies that there is a rule in CFR or MPEP which proscribes such writing. However, this is not true. Moreover, PTO rules require

use of English language and, thus, the proper English grammar, which is not followed in the Office Actions. Moreover, Section 10 implies that each Examiner may create his/her own rules of writing which is impermissible, especially when such a rule is not clearly indicated in the Office Action, as it was not done in the first Office Action. Further, such use is a material
5 misinterpretation of the references' teachings. Applicant repeatedly objected to such language because, if not, the objection is deemed to be waived and cannot be used on appeal, and may even be declared an admission which cannot be changed.

Moreover, Final Office Action does not follow its own rule from the Response to Arguments' because the quotations are again improperly used. There are no quotes around the preamble of
10 claim 1, found after "IBM teaches". Some language from claim 1 is missing between the quotes without proper marking so it is not the "exact language taken from claims". The statement for the whole second paragraph of section 6 of Office Actions states that IBM "teaches" the whole paragraph, without any reservations, although it is not so. Further, the definition that "column or
15 page number is the portion of the reference containing teaching of the quoted language" was used very loosely because it does not contain teaching of the quoted language.

The present invention, as shown in Specification on p.7-8 etc., performs record-by-record transfer between two sites, implemented in DB2 Family Crossloader. It loads from a record (p.8,
20 li. 2-3) pointed to by a cursor. For this purpose it uses a new command, INCURSOR (p.8, li.8-12) to reference each record separately, instead of referencing and transferring the whole file, referenced by INDDN file name. Server has multi-database access to DBMSs. Target site requests data loading from the source site via a block of Structured Query Language (SQL) statements. Target site loads records concurrently with the unloading of records in the source
25 site.

All independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the Multi-database Server database management system, invented by the same assignee. They recite novel structure and thus distinguish over the cited prior art, under
30 U.S.C. 103(a). The purpose and benefit of the claimed invention is to avoid limitations and physical constraints of the File Transfer System at either the source or the target site, as shown in Specification p. 1, li. 23, p. 2, li. 10 - p. 3, li. 8, p. 7, li. 14-21, etc. File Transfer system is used in

conventional systems where the whole file is referenced by INDDN file name. Claimed invention does not use the File Transfer System. Thus, it not bound by the maximum file transfer size, because it transports data record by record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Moreover, it
5 allows transfer of data from multiple data sources, possibly stored in different formats, by using existing conventional technology, such as a multi-database software server and Distributed Relational Database Architecture. Thus, in claimed invention record attributes may span multiple data sources and can provide data in neutral data format. Furthermore, record attributes from multiple record source can be accessed within a single transaction. These claimed novel features
10 distinguish over the cited prior art, under 35 U.S.C. 103(a), and are described in Figures and Specification on p.2, p. 3, li. 1-8; p. 6, li. 18-23, p. 7-8, etc.

Specifically, the independent claim 1, for example, states:

1. A method for loading data from a remote data source record by record, in a computer system
15 network connecting a source site and a target site via a database connection communication line, the method comprising the following steps:

(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs;

(b) at the target site requesting data loading from the source site via a block of Structured
20 Query Language (SQL) statements; and

(c) transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site.

25 Therefore, the present invention teaches in claim 1: "loading data from a remote data source record by record,

(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs;

(b) at the target site requesting data loading from the source site via a block of Structured
30 Query Language (SQL) statements; and

(c) transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site.

Cited IBM reference describes a first version of DataJoiner, which is only one element of the present invention, and shown in FIG. 1 of the present invention at the target site as element 124. The present invention also has Declare Cursor, Load Cursor and Data Type Conversion, as shown in FIG. 1, and has many more structures and properties. DataJoiner is a multi-database server which enables users to define a logically integrated database from heterogeneous, remote data sources (IBM p. 1) and to access it. It moves files having whole tables, as seen in IBM reference on p.12-13. Office Action statement that IBM reference teaches a method, a system and a program storage device for loading data from a remote data source, in a computer system network connecting a source site and a target site via a database connection communication line (See page 11, Fig. 4) is incorrect. The statement does not use Examiner's own rule from Response to Arguments of Final Office Action because it does not use quotes to indicate that it is not from the IBM reference but taken from the present invention, yet it is taken from the present invention. Moreover, it is taken selectively, picking and choosing some words, without showing so. IBM reference does not teach loading and does not teach "program storage device". IBM reference, on cited page 11 and Fig. 4, shows how clients can access a server. Nothing on page 11 even mentions loading.

Final Office Action further states that the IBM reference teaches the method comprising the step "(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs" at page 11, Fig. 4.

This language does not exist in IBM reference. It is taken from claim 1 step (a) which teaches coupling the source site to at least one data source, and to a software server having multi-database access to DBMSs, for the purpose of loading and transferring record by record. This action the IBM reference cannot perform because it is incapable of loading record by record, so that Office Action's statement and rejection is also incorrect.

Final Office Action further states that the IBM teaches the method comprising the step "(b) at the target site requesting data loading from the source site via a block of Structured Query Language (SQL) statements or their equivalent" at page 7, Fig. 1.

This language does not exist in IBM reference. It is taken from the present invention, which teaches loading record by record, and in step (b) of claim 1 states "at the target site requesting data loading from the source site via a block of Structured Query Language (SQL) statements". This action the IBM reference cannot perform because it is incapable of loading record by
5 record, so that Office Action statement is incorrect. Further, cited Fig. 1 from p. 7 illustrates multi-location join, which has nothing to do with loading of step (b) of the present invention. Because join and load are completely different actions, that Office Action statement and rejection is also incorrect.

10 Final Office Action further states that the IBM reference teaches the method comprising the step (c) transporting data via the database connection communication line according to a multi-database access communication protocol" at page 12, 1st paragraph.

This language does not exist in IBM reference and it is taken from the present invention, which
15 teaches loading record by record and in step (c) of claim 1 states "transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site." This action the IBM reference cannot perform because it is incapable of loading record by record, so that Office Action statement and rejection is also
20 incorrect.

Further, the Final Office Action statement, although using quotes, excluded without any indication the most important features of the present invention, namely: transporting data record by record and wherein the target site loading records concurrently with the unloading of records
25 in the source site. Moreover, page 12, 1st paragraph of IBM reference clearly describes data access modules, whereas step (c) of claim 1 of the present invention teaches transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site. Accessing some modules is not the same action as
30 transporting data records. Therefore, that Office Action statement and rejection is, again, incorrect.

Further, Office Actions use the practice, subject to abuse, which disregards the law because in them some parts of claim 1 and even parts of some claimed steps were considered in isolation. Examiner should not disregard express limitations, literally recited in the claim and disclosed in specification. In re Gulack, 703 F.2d 1381, 1384 (Fed. Cir. 1983) the court stated that the claim must be read as a whole and software limitations cannot be dissected from the prior art to support a rejection under 35 USC 103. The claim may not be dissected into arbitrarily selected discrete elements to be analyzed in isolation but must be considered as a whole. This law was not followed in Office Actions. Claim 1 was dissected in arbitrary pieces, often placed between quotation marks, alleging that the language was found in the prior art, although it was not. Neither preamble nor step (c) limitation of claim 1 were reviewed in entirety. They were dissected, some parts were removed, and then each remaining part was reviewed in isolation. If the claim 1 was reviewed properly as a whole, the Office Action would state that it was directed to loading and transporting data record by record via the database connection communication line according to a multi-database access communication protocol, wherein the target site loading records concurrently with the unloading of records in the source site.

Further, Examiner should have noticed and stated in the Office Actions that the purpose and benefit of the claimed invention is to avoid physical constraints of the whole file transfer and not to be bound by the maximum file transfer size. Moreover, the scope and purpose of IBM reference was not stated, although highly relevant.

Next, Examiner held that IBM does not teach transporting data record by record nor that the target site loading records concurrently with the unloading of records in the source site, as claimed.

However, Final Office Action further stated that Hejlsberg teaches a similar method for loading data from a remote data source (See Fig. 3), wherein data is transported record by record and the target site loading records concurrently with the unloading of records in the source site at Col. 7 lines 30-37. It also gave a new reason for rejection: Col. 7 line 66 to Col. 8 line 10. Examiner notes state that: Hejlsberg teaches a data packet for transmitting data from a database using sequential or streaming method wherein data is transmitted "one piece of information at a time". Office action also stated that, at Fig. 4 (used Fig. 3 in first Office Action), "Hejlsberg shows the

layout of a data packet comprises row data, therefore, "piece of information" is correspond to a row data", and that Hejlsberg also provides the advantage of using this streaming method which "allows the system to process data while it is still being received; this is important, for instance, for data being received across the Internet".

5

Applicant respectfully disagrees that reference can invalidate the present invention because Hejlsberg reference does not teach, show or suggest any of the elements of claim 1 for loading record by record, using software server having multi-database access to DBMSs, wherein data is transported record by record via the database connection communication line according to a multi-database access communication protocol, and wherein the target site loading records concurrently with the unloading of records in the source site.

Moreover, Applicant respectfully points out that Hejlsberg reference teaches a platform-independent self-describing data packet creation, which is from a different field. Further, it cannot support a multi-database server and Distributed Relational Database Architecture so it cannot transfer within a single transaction data from multiple data sources, stored in different formats, where record attributes span multiple data sources, which was a long felt need. It has to use the whole file transfer system which is avoided in the present invention. It has a simple system with a dumb client and application server without a DBMS and only its database server has one DBMS, as described as a three-tier system in last paragraph of col. 1 and Fig. 3.

Further, Hejlsberg reference can only transport data in packets, described in Abstract not as records but as a "result set". Further, Examiner's conclusion on pp. 10-11 that packet-by-packet data transfer is the same as row-by-row or record-by-record is clearly incorrect, and although Applicant respectfully required further documentary data on this and all other Examiner's assumptions and holdings not explicitly shown in the references they were never provided.

Moreover, in order to provide system-neutral data, Hejlsberg has to provide a metadata block with data format descriptor, which has to be supplied in a self-described data packet, making it large, thus teaching a data transfer which is very slow and very cumbersome (col. 3, li. 34-43). Because of this, data has to be packed before sending and unpacked when received. Therefore, a data packet of Hejlsberg reference cannot be perceived as an equivalent of a record of the present

invention by a person knowledgeable in art, and packet transfer is not an equivalent of record transfer.

Further on p. 10 of Final Office Action, Examiner states that Hejlsberg teaches at Col. 7 line 66
5 to Col. 8 line 10 that "a data packet representing ordinary data can be "partial", meaning the total data content is divided into multiple data packets", and "the subsequent data packets merely include an data packet identifier and data rows", and, since the data rows (i.e., records) are divided into multiple data packets, when client receives and unloads the first data packet contains the first set of record, the next sets of record are still streaming out of the source site, and that,
10 therefore, the target site loading of records occurs concurrently with the unloading of records in the source site as claimed."

It is true that Hejlsberg teaches: "A data packet representing ordinary data can be "partial", meaning the total data content is divided into multiple data packets. In this case, only the first
15 data packet contains metadata describing the data. The subsequent data packets merely include an data packet identifier i.e., type partial, stored in the header) and multiple data rows. Partial data packets are used to reduce data traffic when the user just wants to see the first N number of rows of the results set, and later fetch the next set of rows in a partial data packet." Therefore, Hejlsberg divides the total data content in multiple partial data packets. First data packet, as
20 shown in FIG. 4, has a header 410, several column descriptors 421, several parameters 425 and variable number of rows 430 (col. 8, li. 13-18). A partial data packet omits parameters 425. Therefore, in Hejlsberg each data packet has multiple rows.

Nowhere does Hejlsberg state as Final Office Action that "the data rows (i.e., records) are
25 divided into multiple data packets". This statement is clearly contrary to Hejlsberg teaching because there a data packet has several rows and not vice versa. This is a mere unsubstantiated speculation.

Moreover, nowhere does Hejlsberg state that, "when client receives and unloads the first data
30 packet contains the first set of record, the next sets of record are still streaming out of the source site, and that, therefore, the target site loading of records occurs concurrently with the unloading of records in the source site as claimed." This is also a mere unsubstantiated speculation.

Moreover, the described data packets and partial data packets of Hejlsberg and drawings (Fig. 4) clearly show that, there, one packet is not the equivalent of one row but contains several rows. Therefore, the Examiner's conclusion on top of p. 10 that "Hejlsberg's packet-by-packet data transfer is same as row-by-row, or record-by-record as claimed" is clearly erroneous and so is the conclusion that Hejlsberg can be used to invalidate the claimed invention, because no other element of Hejlsberg was used to reject the claimed invention. Therefore, independent claims 1, 9 and 17 are not obvious and should be allowed.

Further, Hejlsberg teaches "on demand" delivery, as described in col. 8, li. 1-11, which means that a user has to unpack the first sent packet with metadata, check some parameters and decide whether he wants to receive other packets and, if so, request a fetch next record command, as described in col. 21, li. 35-46. Its sequential access, as defined in col. 7, li. 31-40, teaches that content within each data packet is accessed one piece of information at the time. Col. 20, li. 38-67 describe teachings of the reference as using I/O streams to first collect and stream out one-by-one each table attribute and then allowing system to begin reading and processing data. Hejlsberg further teaches that processing of data is happening sequentially (col. 20, li. 49), by streaming out record field values. In col. 21, li. 14-34 it describes unpacking at client's side. Thus, Hejlsberg teaches sequential transfer and not concurrent transfer of the present invention.

Further, section Col. 7 line 66 to Col. 8 line 10 does not show a target site loading records concurrently with the unloading of records in the source site, as stated in Final Office Action. Instead, this section shows a sequential transfer of a number of packets, where each packet has limited information including a header and row data. Therefore, there is no showing of a target site loading records concurrently with the unloading of records in the source site, as is claimed in the present invention. Further Examiner's assumption of "piece of information" and "allow the system to process data while it is still being received" is also unsupported by the reference.

Thus, Hejlsberg does not transfer data record-by-record but packet-by-packet, where packets have to contain additional metadata, have to be pre-packed and unpacked and are cumbersome. Moreover, its loading and unloading is not performed concurrently but with pauses for decision making, wherein the transfer only continues upon explicit request. Moreover, Examiner's citation of Hejlsberg col. 7, li. 30-37 is incorrect because it does not even mention "concurrent" transfer

but explicitly states sequential transfer, which it shows as sending and accessing content within each data packet one piece of data packet metadata information at the time, in col. 7, li. 31-40, and not sending and receiving. Examiner's interpretation of Fig. 3 as "piece of information" corresponding to row data is also incorrect. Further, Fig. 3 does not even show a row.

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Further, as shown above and throughout Hejlsberg reference, these packets are not records from a DBMS table, as claimed in the present invention, but metadata attributes, as shown in col. 7, li. 31-40 of reference. FIG. 4 also does not show a record as in the present invention but a complicated packet with a header and metadata, in addition to row data, and each said packet has to be unpacked to read header and metadata, before storage.

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Further, Final Office Action states that Hejlsberg also provides the advantage of using this streaming method which "allows the system to process data while it is still being received; this is important, for instance, for data being received across the Internet". Applicant respectfully points out that data "processing" is not the same as transferring, loading, sending or receiving. Data processing and receiving in Hejlsberg would have to happen on the same, one target site. In the claimed present invention, target site loading of records occurs concurrently with the unloading of records in the source site. Therefore, claim 1 does not teach data processing but loading and unloading of records which occurs on two different sites concurrently. Thus, the stated advantage of Hejlsberg has nothing to do with purpose and benefit of the present invention.

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Further, throughout all Office Actions and Advisory Action the Examiner appears to argue that because two references disclose the conventional terms well known and used in every write-up about database management systems that the references teach many elements in common and thus teach related art and can be combined to produce the claimed invention. Moreover, in order to satisfy rejection of just one limitation of a claim, the Examiner combines a few words from one column section with a few word from another column section with a few words from a third column section with a few words from the forth column section. This gross misinterpretation of the law would deem every database invention obvious and unpatentable, because it is not the database term that is taught by the prior art but the action taken upon this item.

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Applicant respectfully objects to the practice used to reject claims of the present invention because in each rejection in Office Actions a few lines of reference were cited and never a whole sentence or paragraph. Besides, the quoted language does not appear in the references and is taken verbatim from the claims of the present invention. Moreover, none of the references has even one whole element of the claims 1, 9 and 17 and their dependent claims. This was held in both Office Actions. Moreover, each reference misses many elements, as shown in both Office Actions, and is from a different field.

Therefore, Office Actions have not provided the evidence which is needed to support rejection, the reasoning sweeps too wide and is without basis in law. Conclusionary statements of similarity and motivation without any articulated rationale or support do not constitute sufficient factual findings when not proven similarity of structure, properties and utilities. Because Office Actions have not met the burden of proof for obviousness, since they did not establish prima facie case, the application is entitled to grant of the patent.

ii) Prima Facie Case of Obviousness by Prior Art Has Not Been Established and the Combination of IBM Reference and Hejlsberg's Would Not Satisfy All the Limitations of the Claims

To establish prima facie obviousness of a claimed invention, all the claims limitations must be taught or suggested by the prior art, MPEP Sec. 2143.03, citing *In re Royka*, 180 USPQ 580 (CCPA 1974).

In the Office Actions the law was not followed. There is no motivation or suggestion in references to combine them, proposed motivation is not the same as in the present invention, there was no reasonable expectation of success in view of the teachings of references and the claimed limitations were not taught or suggested by the proposed combination. Examiner relied on unrelated general knowledge, but in such case it must be articulated and placed on the record. The deficiencies in the cited references cannot be remedied by Examiner's general conclusion about what is general knowledge or common sense. Examiner cannot rely on his own general knowledge but must find the motivation in the prior art references themselves. To establish obviousness, the Examiner must do more than identify elements in the prior art. It is not obvious

to incorporate the elements of references to provide the claimed invention when Examiner's determination of motivation is only that it would increase the speed, which he finds the prior art, whereas the present invention clearly teaches a more important benefit of avoiding the physical constraints of the whole file transfer and not to be bound by the maximum file transfer size. This benefit was not shown anywhere in the Office Actions, and thus, the claimed invention could not be found obvious in view of references' teachings.

As stated in MPEP Sec. 706.02(j), 35 U.S.C. 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references. After indicating that the rejection is under 35 U.S.C. 103, the examiner should set forth in the Office action:

- (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,
- (B) the difference or differences in the claim over the applied reference(s),
- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP Sec. 2143 - 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP Sec. 2144 - 2144.09 for examples of reasoning supporting obviousness rejections.

Office actions and Advisory Action are not following this law. Although Applicant argued in the Responses to Office Actions that the referenced prior art must be from the same field, since the references are obviously not solving the same problem, and that a combination or modification must be shown in the prior art itself, each Examiner's Office Action failed to address these points and follow the law. As shown by the Applicant, the teachings of the referenced prior art are not relevant to the claimed invention, the proposed modifications of the applied reference(s) necessary to arrive at the claimed subject matter are not shown, and an explanation about why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification was never given.

Further, each cited reference is individually complete and they do not suggest a combination or modification and are impossible to combine. Case *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 18 USPQ2d 1016 Fed. Cir. 1991) is on point as is the case *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984), which held that where there is no technological motivation for a modification or if a proposed modification of reference would destroys intent, purpose or function of the reference, the prima facie case of obviousness is not properly established. This law was not followed in the Office Actions either.

10 The Examiner has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because he did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings, a reasonable expectation of success was not shown (and is impossible) and that the
15 prior art reference(s), which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Examiner did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must
20 present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Furthermore, Applicant repeatedly pointed out that the cited references are from nonanalogous art. MPEP Sec. 2141.01(a) on Analogous and Nonanalogous Art states:

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TO RELY ON A REFERENCE UNDER 35 U.S.C. 103, IT MUST BE ANALOGOUS PRIOR ART

The examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular
30 problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."); and Wang
35 Laboratories Inc. v. Toshiba Corp., 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

PTO CLASSIFICATION IS SOME EVIDENCE OF ANALOGY, BUT SIMILARITIES AND DIFFERENCES IN STRUCTURE AND FUNCTION CARRY MORE WEIGHT

While Patent Office classification of references and the cross-references in the official search notes are some evidence of "nonanalogy" or "analogy" respectively, the court has found "the similarities and differences in structure and function of the inventions to carry far greater weight." In re Ellis, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973) In re Clay, 966 F.2d 656, 23 USPQ2d 1058 (Fed. Cir. 1992) (Claims were directed to a process for storing a refined liquid hydrocarbon product in a storage tank having a dead volume between the tank bottom and its outlet port wherein a gelled solution filled the tank's dead volume to prevent loss of stored product while preventing contamination. One of the references relied upon disclosed a process for reducing the permeability of natural underground hydrocarbon bearing formations using a gel similar to that of applicant to improve oil production. The court disagreed with the PTO's argument that the reference and claimed inventions were part of the same endeavor, "maximizing withdrawal of petroleum stored in petroleum reserves," and found that the inventions involved different fields of endeavor since the reference taught the use of the gel in a different structure for a different purpose under different temperature and pressure conditions, and since the application related to storage of liquid hydrocarbons rather than extraction of crude petroleum. The court also found the reference was not reasonably pertinent to the problem with which the inventor was concerned because a person having ordinary skill in the art would not reasonably have expected to solve the problem of dead volume in tanks for refined petroleum by considering a reference dealing with plugging underground formation anomalies.).

The law cited above states that referenced art must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned that logically would have commended itself to an inventor's attention in considering his problem. As is shown in MPEP citation above, *In re Clay* the court defined the endeavor very narrowly as just "a withdrawal of oil" which removes from the field of analogous art all other actions in petroleum industry. Further, it stated that the inventions involved different fields of endeavor since the reference taught the use of the gel in a different structure for a different purpose under different temperature and pressure conditions, and since the application related to storage of liquid hydrocarbons rather than extraction of crude petroleum, as shown in the reference. Thus, the court stated that actions of "storage" and "extraction" are different fields of endeavor and that purpose and conditions are also very important and it held that the reference was not reasonably pertinent to the problem with which the inventor was concerned.

Final Office Action makes an unsupported conclusion that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine IBM and Hejlsberg's teaching to improve data transmitting speed by "allowing the system to process data while it is still being received" and "to reduce user's waiting time" (p. 11). Final Office Action gives a new reason of rejection: "Modification of the IBM's system as suggested by Hejlsberg would reduce user's waiting time for data to arrive, especially "for data being received across the Internet", as noted by Hejlsberg at Col. 7 lines 30-37."

This section of Final Office Action is apparently used to show that modification and combination of these two references is allowable to support claims rejection under 35 USC Sec. 103(a). The

motivation is stated as: "to improve data transmitting speed by allowing the system to process data while it is still being received" and "modification of the IBM's system a suggested by Hejlsberg would reduce user's waiting time for data to arrive". This may be one goal of Hejlsberg reference.

5

However, this is not at all the goal of the claimed present invention. As stated above, all independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the IBM Multi-database Server database management system, to allow data transfer which is not limited by physical constraints of the file transfer system at either the source or the target site, and by the maximum file transfer size. This is accomplished by transporting data record by record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Claimed invention does not have a purpose to improve data transmitting speed by process data while still being received, in order to reduce user's waiting time for data to arrive. IBM reference does not have this scope and purpose, either.

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Further, Final Office Action stated that Hejlsberg also provides the advantage of using this streaming method which "allows the system to process data while it is still being received; this is important, for instance, for data being received across the Internet". Applicant respectfully pointed out that data "processing" is not the same as transferring, loading, sending or receiving. Thus, the field and stated advantage of Hejlsberg has nothing to do with purpose and benefit of the present invention.

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Therefore, there is no teaching given in Office Actions that shows that these references should be combined to improve the transfer, nor is it shown that the combination will result in transporting data record by record, where the server has multi-database access to DBMSs, and wherein the target site loading records concurrently with the unloading of records in the source site, for the purpose of avoiding the physical constraints of the whole file transfer and not to be bound by the maximum file transfer size. Therefore, independent claims 1, 9 and 17 are not obvious and should be allowed.

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Further, Applicant challenged the Office Actions' "would have been obvious" allegations used to reject all claims of the present invention under Sec. 103 and, as allowed under MPEP Sec.

2144.03, respectfully requested that Examiner cites prior art references which support all these "would have been obvious" allegations and show how modifications can be accomplished and what motivation was used to modify a reference to arrive at the claimed subject matter and to show how this combination of modified references functions and which structure it has.

5 Motivation shown in Final Office Action does not support the rejection. Moreover, since it is required by law that the motivation to combine the references must be found in the referenced prior art before the references can be combined, Applicant respectfully requested further evidence supporting this showing but it was not provided.

10 Methods taught by these two references are different of the present invention and are from different art fields, as shown above. Contrary to Examiner's comments on p. 12 of Final Office Action, the fact that Hejlsberg mentions source site, target site and database server does not place it in analogous art because it does not have the same or similar purpose, operation or structures. References cannot handle and do not perform all elements of the independent claims 1, 9 and 17
15 and, therefore, their dependent claims. Further, they satisfy a different need from a different area. Moreover, it is impossible to modify a simple system of Hejlsberg to include a multi-database access supporting concurrent record loading and unloading, as claimed in independent claims 1, 9 and 17 of the present invention, and it is unnecessary to modify IBM reference to support data packet transfer since it already supports data neutral format. Moreover, each cited reference is
20 individually complete and they do not suggest a combination or modification and are impossible to combine.

Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally
25 available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Actions did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what
30 the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan

would have found the claimed invention to have been obvious in light of the teachings of the references.

Regarding Section 14 of Final Office Action (p. 14), Applicant points out that numerous pages of arguments were included in both Amendments and that, therefore, Applicant was not supplying only general allegations but very specifically pointed out numerous distinctions between the claimed invention and references and the law that was erroneously applied or not followed in the Office Actions.

Because none of the referenced prior art teaches elements of claims 1, 9 and 17 and their combination is invalid, there is no valid reason for rejection of these independent claims and claims dependent thereof. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 1, 9 and 17 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate independent claims 1, 9 and 17 and their dependent claims and a prima facie case of obviousness has not been established under USC Sec. 103(a).

iii) **The Examiner Uses Impermissible Hindsight to Modify the Teachings of IBM Reference Based on Heilsberg in Order to Combine Them**

Examiner's assertion that it would clearly be obvious to combine selected references is based on nothing except the Examiner's bare opinion, hindsight, and a need to reconstruct the claimed invention. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure (MPEP 2143). MPEP 2143.01 states that the proposed modification cannot render the prior art unsatisfactory for its intended purpose and cannot change the principle of operation of a reference. Examiner's suggestion to combine selected references would require a substantial reconstruction and redesign, and is probably impossible to accomplish such a combination, as Applicant remarked in the Amendments, and would definitely change all references' basic principle under which they were designated to operate.

The mere fact that references can be combined or modified does not render the resulting combination obvious unless the prior art also suggests the desirability of the combination. See MPEP Sec. 2143.01, citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). It is impermissible to use "hindsight reconstruction to pick and chose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicant challenged the Office Actions' "would have been obvious" allegation used to reject all claims of the present invention under Sec. 103 and, as allowed under MPEP Sec. 2144.03, respectfully requested that Examiner cites prior art references which support all these "would have been obvious" allegations and show how modifications can be accomplished and what motivation was used to modify a reference to arrive at the claimed subject matter and to show how this combination of modified references functions and which structure it has, which was never provided. Motivation shown in Final Office Action does not support the rejection. Moreover, since it is required by law that the motivation to combine the references must be found in the referenced prior art before the references can be combined, Applicant respectfully requested further evidence supporting this showing, which was never provided.

Examiner relies on IBM and Hejlsberg references for disclosing all the limitations of the claims 1-24 but fails to point out how these quotations, even if existent in the cited prior art, can be combined or that the prior art shows desirability of the combination. The Examiner's position is that it would be obvious and he merely asserts it without any explanation.

As shown above, it is respectfully submitted that the prior art does not teach or even suggest modifying the teachings of IBM and Hejlsberg to combine them. It is only the impermissible hindsight by the Examiner that the teachings can be combined and the Examiner has impermissibly used conventional terms for picking and choosing isolated disclosures in the prior art to assert that the claims are unpatentable. The cited prior art only discloses conventional database terms which would not lead a person of ordinary skill to use those unrelated terms and functions to provide the claimed present invention. Moreover, it is impossible to combine the cited reference. Furthermore, most of these references teach against the present invention.

Therefore, none of the cited references, either alone or in combination taken as a whole, teaches or suggests all the limitations of independent claims 1, 9 and 17 and their dependent claims and none of the references even recognizes a need for such an invention because they are from different fields and the references cannot be combined. Since none of the references teach or suggest the claimed subject matter of the present invention these cited references cannot be used to invalidate independent claims 1, 9 and 17 and their dependent claims because they fail to teach any and all the steps of these claims and they cannot be modified and combined. Thus, it is respectfully submitted that the cited prior art does not render claims 1-24 unpatentable.

Sec. 103(a) Rejection of Claims 2, 10 and 18

As per claims 2, 10, 18, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17, as discussed above, and that Hejlsberg also teaches: "a data record being transported across the database connection communication line as soon as one or more data records are unloaded from the source site, and data loading at the target site beginning as soon as a record was transported to the target site" at Col. 7 lines 30-36 and Col. 7 line 66 to Col. 8 line 17.

The Applicant respectfully objects to this misinterpretation because Hejlsberg reference does not have the quoted language. It is the language taken verbatim from the claim 2 of the present invention, with Hejlsberg reference page numbers added. As shown above, Hejlsberg reference does not describe concurrent transfer but sequential, processing data on the client while being received by the client, it does not deal with records but packets and their metadata parts and does not transfer "as soon as" but waits for a demand or fetch request.

Moreover, it is shown above that this reference does not perform any elements of the independent claims 1, 9 and 17, and therefore their dependent claims. It is from a different field, does not need or suggest modification and combination with another reference and such combination is impossible. Further, it satisfies a different need from a different area. Therefore, this reference cannot be used to invalidate dependent claims 2, 10 and 18. Further, Office Action held that IBM reference does not support concurrent record-by-record transfer.

Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 2, 10 and 18 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 2, 10 and 18 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

Sec. 103(a) Rejection of Claims 6, 14, and 22

As per claims 6, 14, 22, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above and that IBM also teaches: "the server site having access to multiple data sources, physically distributed and disparate DBMSs, residing on different hardware systems and possibly storing data in a different format" at page 11, Fig. 4.

It is shown above that these reference do not perform all elements of the independent claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is

impossible. Further, they satisfy a different need from a different area. Further, Office Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 6, 14 and 22.

5 Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not
10 shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed
15 invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 6, 14 and 22 and their
20 combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 6, 14 and 22 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

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Sec. 103(a) Rejection of Claim 7, 15 and 23

As per claims 7, 15, 23, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 6, 14, 22 as discussed above and that
30 IBM also teaches: "the server site loading data from multiple data sources, further comprising a step for using a means for consolidating data from multiple data sources" at page 1, 4th and 5th and page 11, Fig. 4.

It is shown above that these reference do not perform all elements of the independent claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is impossible. Further, they satisfy a different need from a different area. Moreover, Office Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 7, 15 and 23.

Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 7, 15 and 23 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 7, 15 and 23 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

Sec. 103(a) Rejection of Claim 8, 16 and 24

As per claims 8, 16, 24, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above and that IBM also teaches: "the database connection communication line utilizing the TCP/IP protocol" at page 11, 3rd paragraph, and "the software server having multi-database access to DBMSs including a Distributed Relational Database Architecture (DRDA)" at page 12, 1st paragraph.

It is shown above that these reference do not perform all elements of the independent claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is impossible. Further, they satisfy a different need from a different area. Moreover, Office Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 8, 16 and 24.

Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 8, 16 and 24 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 8, 16 and 24 because they fail to teach any and all the steps of these claims. Thus, these

references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

(B) Sec. 103(a) Rejection of Claims 3, 11 and 19

Claims 3, 11, 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over IBM and Hejlsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Gottenmukkala ("Interfacing Parallel Applications and Parallel Databases"), hereinafter "Gottenmukkala".

As per claims 3, 11, 19, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above, which Applicant showed as incorrect in discussion above. It is noted with appreciation that Final Office Action held that IBM and Hejlsberg do not explicitly teach: "the data loading being performed in a pipeline manner, loading data records in multiple partitions with a plurality of parallel streams, pointed to by a plurality of data source partition cursors".

Final Office Action stated that Gottenmukkala "teaches a method for perform database query in parallel using cursors (See Fig. 2), wherein "the data loading being performed in a pipeline manner, loading data record in multiple partitions with a plurality of parallel streams, pointed to a plurality of data source partition cursors" at page 2, Col. 1 and Figs. 2-7, and that, thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify IBM and Hejlsberg teaching so that the data loading could be performed in parallel as taught by Gottenmukkala, in order "to speed up the performance of complex queries, which makes manipulation of large data sets feasible and manageable" (page 1, Col. 1, 1st paragraph).

The Applicant respectfully objected to this misinterpretation because Gottenmukkala reference does not have the quoted language. It is the language taken verbatim from the claim 3 of the present invention, with Gottenmukkala reference page numbers added. Further, Gottenmukkala teaches query processing in a parallel database which is a different field from other references and claimed present invention which claims data transfer. Moreover, the reference partitions the query before execution, sends it to different nodes for execution and receives back in the same

application the data being sent from the nodes, as cited in col. 1 of p.2. Thus, it is not from the same or similar field and does not teach concurrent record-by-record data transfer into partitioned tables that receive the data, as claimed in the present invention.

- 5 Next, the Office Action made an unsupported conclusion that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify IBM and Hejlsberg teaching so that the data loading could be performed in parallel as taught by Gottenmukkala, in order "to speed up the performance of complex queries, which makes manipulation of large data sets feasible and manageable" (page 1, Col. 1, 1st paragraph).

10

This sentence is apparently used to show that modification and combination of these three references is allowable to support claims rejection under 35 USC Sec. 103(a). The motivation is stated as: "to speed up the performance of complex queries, which makes manipulation of large data sets feasible and manageable" (page 1, Col. 1, 1st paragraph). However, this is not the goal
15 of the claimed present invention but of Gottenmukkala reference. As stated above, all independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the IBM Multi-database Server database management system without being limited by physical constraints of the file transfer system at either the source or the target and not bound by the maximum file transfer size. This is accomplished by transporting data record by
20 record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Transfer of data from multiple data sources, possibly stored in different formats, is accomplished using existing conventional technology.

Moreover, it is shown above that these reference do not perform all elements of the independent
25 claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is impossible. Further, they satisfy a different need from a different area. Moreover, Office Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 3, 11 and 19.

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Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any

suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 3, 11 and 19 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 3, 11 and 19 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

(C) Sec. 103(a) Rejection of Claims 4-5, 12-13, 20-21

Claims 4-5, 12-13, 20-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over IBM and Hejlsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Vassilakis et al. ("Implementing Embedded Valid Time Query Languages"), hereinafter "Vassilakis".

Sec. 103(a) Rejection of Claim 4, 12 and 20

As per claims 4, 12, 20, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above, which Applicant showed as incorrect in discussion above. It is noted with appreciation that Final Office Action held that IBM and Hejlsberg do not explicitly teach: "the block of SQL statements

comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode".

5 Next, Final Office Action stated that, however, Vassilakis "teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg teaching wherein "the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode" at page 7. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement IBM and Hejlsberg's teaching in "EXECUTE IMMEDIATE mode" in order to process the dynamic formulated SQL statement."

10 The Applicant respectfully objects to these misinterpretations because the quoted language is not "similar to IBM and Hejlsberg teaching". Further, Vassilakis reference does not have the quoted language. It is the language taken verbatim from the claim 4 of the present invention, with Vassilakis reference page numbers added as page 7. Further, Vassilakis teaches implementing of embedded valid time query languages which is a different field from other references and claimed present invention which claims data transfer. Moreover, using cursor as an interface to the database, mentioned on p. 16 of the Final Office Action, is irrelevant. Thus, Vassilakis is not from the same or similar field and does not teach concurrent record-by-record data transfer in a multi-database DBMS, as claimed in the present invention.

15 Next, the Final Office Action makes an unsupported conclusion that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement IBM and Hejlsberg's teaching in "EXECUTE IMMEDIATE mode" in order to process the dynamic formulated SQL statement."

20 This sentence is apparently used to show that modification and combination of these three references is allowable to support claims rejection under 35 USC Sec. 103(a). The motivation is stated as: " to process the dynamic formulated SQL statement." However, this is not the goal of the claimed present invention but of Vassilakis reference. As stated above, all independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the IBM Multi-database Server database management system without being limited by physical

constraints of the file transfer system at either the source or the target and not bound by the maximum file transfer size. This is accomplished by transporting data record by record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Transfer of data from multiple data sources, possibly stored in different formats, is accomplished using existing conventional technology.

Moreover, it is shown above that these reference do not perform all elements of the independent claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is impossible. Further, they satisfy a different need from a different area. Moreover, Final Office Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 4, 12 and 20.

Thus, Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 4, 12 and 20 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 4, 12, 20 because they fail to teach any and all the steps of these claims. Thus, these references

cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

Sec. 103(a) Rejection of Claim 5, 13 and 21

5

As per claims 5, 13, 21, Final Office Action stated that IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above, which Applicant showed as incorrect in discussion above.

10 It is noted with appreciation that Examiner held that IBM and Hejlsberg do not teach: "the block of SQL statements comprises: a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCURSOR with the same cursor name for pointing to the receiving record at the target site".

15

Final Office Action stated that, however, Vassilakis teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg's teaching using "a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an

20 operator INCURSOR with the same cursor name for pointing to the receiving record at the target site" at page 2, section 2.2, and that, as noted by Vassilakis, "using cursors, an application may obtain addressability to tuples stored in the database (one tuple at a time), fetch data values into its address space, as well as delete or modify the tuples"(page 3, section 2.2), and that, thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made

25 to combine Vassilakis with IBM and Hejlsberg's teaching in order to allow applications to address considered database data at row level (i.e. tuple level) instead of data table level, in order to reduce unnecessary data transfer by transferring only relevant rows instead of the whole table. On p. 17 of the Final Office Action, Examiner states that using cursors allows fetch, delete and modification of tuples stored in a database.

30

The Applicant respectfully objects to these misinterpretations because the quoted language is not "similar to IBM and Hejlsberg teaching". Further, Vassilakis reference does not have the quoted

language. It is the language taken verbatim from the claim 5 of the present invention, with Vassilakis reference page numbers added. Further, Vassilakis teaches implementing of embedded valid time query languages for data already stored in a database which is a different field from other references and claimed present invention which claims data transfer. Thus, it is not from the same or similar field and does not teach concurrent record-by-record data transfer in a multi-database DBMS, as claimed in the present invention.

Next, the Final Office Action makes an unsupported conclusion that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Vassilakis with IBM and Hejlsberg's teaching in order to allow applications to address considered database data at row level (i.e. tuple level) instead of data table level, in order to reduce unnecessary data transfer by transferring only relevant rows instead of the whole table.

This sentence is apparently used to show that modification and combination of these three references is allowable to support claims rejection under 35 USC Sec. 103(a). The motivation is stated as: " in order to allow applications to address considered database data at row level (i.e. tuple level) instead of data table level, in order to reduce unnecessary data transfer by transferring only relevant rows instead of the whole table." However, reduction of unnecessary data transfer by transferring only relevant rows instead of the whole table is not the goal of the claimed present invention but of Vassilakis reference. As stated above, all independent claims 1, 9 and 17 of the present invention are specifically directed to show an improvement of the IBM Multi-database Server database management system without being limited by physical constraints of the file transfer system at either the source or the target and not bound by the maximum file transfer size. This is accomplished by transporting data record by record, so that operations of sending one record and receiving another record are happening concurrently on a source and target site. Transfer of data from multiple data sources, possibly stored in different formats, is accomplished using existing conventional technology.

Moreover, it is shown above that these reference do not perform all elements of the independent claims 1, 9 and 17, and therefore their dependent claims. They are from a different field, do not need or suggest modification and combination with another reference and such combination is impossible. Further, they satisfy a different need from a different area. Moreover, Final Office

Action held that IBM reference does not support concurrent record-by-record transfer. Therefore, these references cannot be used to invalidate dependent claims 5, 13 and 21.

Thus, Final Office Action has not established a prima facie case of obviousness because the three basic criteria stated above, which must be met, were not met because it did not point out: to any suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings to arrive at the claimed subject matter, a reasonable expectation of success was not shown (and is impossible) and that the prior art references, which must teach or suggest all the claim limitations, do so here, which they do not. Furthermore, the Office Action did not satisfy the initial burden to provide some suggestion in the references of the desirability of doing what the inventor has done, because to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Because none of the referenced prior art teaches elements of claims 5, 13 and 21 and their combination is invalid, there is no valid reason for rejection of these dependent claims. Therefore, each cited reference, by itself or in combination, cannot be used to invalidate claims 5, 13, 21 because they fail to teach any and all the steps of these claims. Thus, these references cannot be used to invalidate these dependent claims and a prima facie case of obviousness has not been established under 35 USC Sec. 103(a).

8. Conclusion

Regarding claims 1-24, none of the cited references teaches, shows, suggests or is even remotely related to the claimed present invention. Therefore, these reference cannot be used to invalidate independent claims 1, 9, and 17 and their dependent claims. Moreover, the Examiner combined references from different arts in order to reject claims 1-24, by quoting parts of sentences nonexistent in those references. However, even if these quotes are correct, the combination must be pointed to in the prior art itself and no such combination is pointed to in the cited references

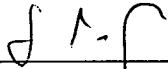
nor it could be since they are from different fields. Therefore, these references cannot be used to invalidate independent claims 1, 9 and 17 and their dependent claims because they fail to teach any and all the steps of these claims.

5 Improper combination of cited references is used in each claim rejection in the Office Action. None of the cited references suggests combination under In re Sernaker, 217 U.S.P.Q. 1, 6 (CAFC 1983), and one skilled in the art would have no reason to make a combination since they are from different fields, impossible to combine and individually complete. Moreover, none of the cited references discloses the subject matter and features of claims 1-24 of the present
10 invention and even if they did show some individual features, they would not be able to meet the claims of the present invention which provide new and unexpected results over these references and are thus unobvious and patentable under Sec. 103(a).

In view of the foregoing, it is submitted that the final rejections of claims 1-24 are improper and,
15 accordingly, the Board is respectfully requested to reverse the final rejections and order that this application proceed immediately to issue.

Respectfully submitted,

20 Date: June 13, 2005



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APPENDIX

WHAT IS CLAIMED IS:

- 1 1. (Previously Amended) A method for loading data from a remote data source record by
2 record, in a computer system network connecting a source site and a target site via a database
3 connection communication line, the method comprising the following steps:
 - 4 (a) coupling the source site to at least one data source and to a software server having
5 multi-database access to DBMSs;
 - 6 (b) at the target site requesting data loading from the source site via a block of Structured
7 Query Language (SQL) statements; and
 - 8 (c) transporting data record by record via the database connection communication line
9 according to a multi-database access communication protocol, wherein the target site loading
10 records concurrently with the unloading of records in the source site.
- 1 2. (Previously Amended) The method according to claim 1, wherein a data record is
2 transported across the database connection communication line as soon as one or more data
3 records are unloaded from the source site, and data loading at the target site beginning as soon as
4 a record was transported to the target site.
- 1 3. (Previously Amended) The method according to claim 1, wherein the data loading is
2 performed in a pipeline manner, loading data records in multiple partitions with a plurality of
3 parallel streams, pointed to by a plurality of data source partition cursors.

1 4. (Original) The method according to claim 1, wherein the block of SQL statements
2 comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE
3 mode.

1 5. (Previously Amended) The method according to claim 1, wherein the block of SQL
2 statements comprises:

3 a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing
4 separately each SELECT statement result record unloading from the server site, and
5 a LOAD command and an operator INCURSOR with the cursor name for pointing to the
6 receiving record at the target site.

1 6. (Previously Amended) The method according to claim 1, wherein the server site has
2 access to multiple data sources, physically distributed and disparate DBMSs, residing on
3 different hardware systems and possibly storing data in a different format.

1 7. (Previously Amended) The method according to claim 6, wherein the server site loads
2 data from multiple data sources, further comprising a step for using a means for consolidating
3 data from multiple data sources.

1 8. (Previously Amended) The method according to claim 1, wherein the database
2 connection communication line utilizing the TCP/IP protocol, and the software server has multi-
3 database access to DBMSs including a Distributed Relational Database Architecture (DRDA).

1 9. (Previously Amended) A system for loading data from a remote data source record by
2 record, comprising:
3 a source site coupled to at least one data source and having a software server with multi-
4 database access to DBMSs;
5 a target site requesting data loading from the source site via a block of Structured Query
6 Language (SQL) statements; and
7 a database connection communication line for transporting data record by record and
8 according to a multi-database access communication protocol, wherein the target site loading
9 records concurrently with the unloading of records in the source site.

1 10. (Previously Amended) The system according to claim 9, wherein a data record is
2 transported across the database connection communication line as soon as one or more data
3 records are unloaded from the source site, and data loading at the target site beginning as soon as
4 a record was transported to the target site.

1 11. (Previously Amended) The system according to claim 9, wherein the data loading is
2 performed in a pipeline manner, loading data records in multiple partitions with a plurality of
3 parallel streams, pointed to by a plurality of data source partition cursors.

1 12. (Original) The system according to claim 9, wherein the block of SQL statements
2 comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE
3 mode.

1 13. (Previously Amended) The system according to claim 9, wherein the block of SQL
2 statements comprises:

3 a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing
4 separately each SELECT statement result record unloading from the server site, and

5 a LOAD command and an operator INCURSOR with the cursor name for pointing to the
6 receiving record at the target site.

1 14. (Previously Amended) The system according to claim 9, wherein the server site has
2 access to multiple data sources, physically distributed and disparate DBMSs, residing on
3 different hardware systems and possibly storing data in a different format.

1 15. (Previously Amended) The system according to claim 14, wherein the server site loads
2 data from multiple data sources, further comprising a means for consolidating data from multiple
3 data sources.

1 16. (Previously Amended) The system according to claim 9, wherein the database connection
2 communication line utilizing the TCP/IP protocol, and the software server has multi-database
3 access to DBMSs including a Distributed Relational Database Architecture (DRDA).

1 17. (Previously Amended) A program storage device readable by a computer tangibly
2 embodying a program of instructions executable by the computer to perform method steps for
3 loading data from a remote data source record by record, in a computer system network
4 connecting a source site and a target site via a database connection communication line, the
5 method comprising the following steps:

6 (a) coupling the source site to at least one data source and to a software server having
7 multi-database access to DBMSs;

8 (b) at the target site requesting data loading from the source site via a block of Structured
9 Query Language (SQL) statements; and

10 (c) transporting data record by record via the database connection communication line
11 according to a multi-database access communication protocol, wherein the target site loading
12 records concurrently with the unloading of records in the source site.

1 18. (Previously Amended) The method according to claim 17, wherein a data record is
2 transported across the database connection communication line as soon as one or more data
3 records are unloaded from the source site, and data loading at the target site beginning as soon as
4 a record was transported to the target site.

1 19. (Previously Amended) The method according to claim 17, wherein the data loading is
2 performed in a pipeline manner, loading data records in multiple partitions with a plurality of
3 parallel streams, pointed to by a plurality of data source partition cursors.

1 20. (Original) The method according to claim 17, wherein the block of SQL statements
2 comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE
3 mode.

1 21. (Previously Amended) The method according to claim 17, wherein the block of SQL
2 statements comprises:

3 a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing
4 separately each SELECT statement result record unloading from the server site, and

5 a LOAD command and an operator INCURSOR with the cursor name for pointing to the
6 receiving record at the target site.

1 22. (Previously Amended) The method according to claim 17, wherein the server site has
2 access to multiple data sources, physically distributed and disparate DBMSs, residing on
3 different hardware systems and possibly storing data in a different format.

1 23. (Previously Amended) The method according to claim 22, wherein the server site loads
2 data from multiple data sources, further comprising a step for using a means for consolidating
3 data from multiple data sources.

1 24. (Previously Amended) The method according to claim 17, wherein the database
2 connection communication line utilizing the TCP/IP protocol, and the software server has multi-
3 database access to DBMSs including a Distributed Relational Database Architecture (DRDA).